

9 September 1958

MEMORANDUM FOR: Deputy Director/Intelligence

THROUGH: Acting Assistant Director, O&A
THROUGH: Chief, Economic Research, O&A
✓THROUGH: Chief, Industrial Division, O&A

SUBJECT: Comment on Survey of the Soviet Machine Tool Industry
by [REDACTED] 25X1A9a

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1. We found [REDACTED] survey to be an interesting compilation of Soviet sources in this field. We have used these, and many other, open sources in our own analysis of the Soviet machine tool industry.
2. We disagree with some of the author's interpretations of Soviet data. We feel that his remarks on quality of Soviet machine tools are unduly critical, occasionally contradictory and in some cases inaccurate. We believe that the quality of machine tools currently being produced in the USSR is adequate for the purposes for which they are to be used. These machines are usually lacking in frills, eye-appeal and finish but are capable of producing accurate products without excessive downtime. The author's assumption that Soviet statistics on machine tool production include up to 25% "service-shop" items (page 21) is considered inaccurate. The US production figures for 1952 and 1955 quoted by the author contain a greater number of this type of equipment than the official Soviet figures for those years. More detailed comments are presented below.
3. Import figures for the years listed in Table II are not available from official Soviet statistics but are considered probably accurate. The import figure of 21,745 units for 1942-44 in Table IV is too low. We estimate it to be more than 10,000 units.
4. The compilation of statistical data on production is accurate for the years reported on by the Soviets in their handbooks. The estimated production of 84,000 units for 1942-44 in Table IV is considered too low. Production for these years is estimated to be at least 100,000 units.
5. The author has not proved his assertion on page 11 that Soviet statistical data is misrepresented. The so-called 367,571 units unaccounted for in the author's calculations in Table IV are almost all explained away logically on page 12 by his own statement that they

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were probably mostly "war-reparations", and that the balance were imports from Bloc countries. We estimate "war-reparations" to have been a minimum of 250,000 units and production and imports for 1941-44 to be greater than the author has estimated. We, therefore, accept the reported Soviet inventory figures as probably true.

6. The author reports US production in 1952 as 230,000 units (page 13) and in 1955 as 106,000 units (page 20). Although accurate US statistics on US production of machine tools are not available, we consider the figures quoted in this report as too high. The NMTBA (National Machine Tool Builders Association) reports production by its members to be 96,800 units for 1952 and 50,500 units for 1955. Various sources estimate that the members of this organization produce 70 to 85% of all US machine tool production. The author's statistics on US production originate from the Bureau of Census. Our analysis of these figures leads to the conclusion that a large portion of the production reported by Census is not comparable to the Soviet types produced in the corresponding years, 1952 and 1955. For example, the Bureau of Census figure includes 37,440 units valued at \$1,512,000 or less than \$50 each. They are bench grinders, Senger Koeback type and are not included by the Soviets or NMTBA as machine tools, but are suitable for use in home workshops, service-shops and garages. This category, the author states (page 20) is excluded from the 106,000 units he reports as produced by US in 1955.

7. The inclusion of photos of Soviet machines displayed at the Brussels Fair in part refutes the author's statement (page 21) that current Soviet models approach US equipment produced up to and during World War II. For example:

a. Model 6012P, page 15 (Seen by I/FE analyst at the Fair. Correct model number is 6013P). A magnetic tape-controlled three-dimensional milling machine working through a transistorized digital computer. Comment: This item is not equaled by anything US has to date.

b. Model 6012P, page 17. A two dimensional profile milling machine controlled by a punched tape. Comment: As modern as 1958.

c. Model 262P, page 17. A horizontal boring mill with table and head coordinating motions and speed and feed settings controlled by punched cards. Comment: Again modern concept in US.

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d. Model 5033, page 18. A semi-automatic gear grinding machine incorporating a principle originating in Swiss machines. Comment: Relatively new even in US, being produced here only since Korea.

8. The examples given above indicate that the best Soviet models are on a par with, or are very close to, US first quality machines. All Soviet production, of course, does not consist of the most modern types, and many can be considered obsolescent by US standards.

9. The author contends (page 22) that total productivity of the current annual production of machine tools in US exceeds by 50% that of current Soviet annual production. He estimates that current annual Soviet production of machine tool units is greater than that of US, and the total productive capacity of the machine tools must be considered at least equal to that of US annual output. The Soviets have probably surpassed the US in the use of ceramic tools, which far exceed the tungsten carbide cutting speeds. The author mentions US advances through the use of tungsten carbide tooling, (page 21) but the USSR has also advanced in this field, even if not to the same degree.

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Chief, Producers' Equipment Branch, /I

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